LEN	IUNE	i	PROJEC	CT:				
		ath River Dams Removal	Klamath River					
		al Removal Option	Oregon					
		o No. 2 Dam & Powerplant Removal	WOID:	AF652	ESTIMATE LEVEL		Feasibility	
		Probable Low	REGION	MP	UNIT F	PRICE LEVE	Jul-10	
		Cycle - 50 Year	FILE:	U:\2011 Projects\Klamath\002		! Completed Sheets\MP MPL MPH\02 - Copo		
	T	mary		2\MPL\(Copco 2 N	APL - Probabl	e.xlsx]Life Cycle Sumr	nary	
PLANT ACCOUNT	PAY ITEM	DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT	
		Periodic Costs - Year 1	**				\$175,470.00	
		Periodic Costs - Year 17					\$66,899.00	
		Periodic Costs - Year 25		***************************************			\$15,652.86	
		Periodic Costs - Year 33					\$35,037.52	
		Periodic Costs - Year 50		W. W			0.00	
		(Assumes gov't service / construction contracts)						
		Annual Costs - Maintenance					\$630,902.00	
		Subtotal 1						
	 	Mobilization	F0/				\$923,961.38	
	 	Subtotal 1 with Mobilization	5%	+/-	ļ		\$46,000.00	
	 		al (lata 2040)	4- NTD / L /	T	1	\$969,961.38	
	-	Escalation to Notice to Proceed (NTP): from Unit Price Lev			Υ	<u> </u>	\$155,718.62	
		Subtotal 2 = Subtotal 1 with Mobilization + Escalation to N	at 1.5%	per year for	120	months.	*	
		Design Contingencies				ļ	\$1,125,680.00	
		Subtotal 3 = Subtotal 2 + Design Contingencies	8%	+/-		 	\$74,320.00	
		Allowance for Procurement Strategies (APS)	00/				\$1,200,000.00	
		Type of solicitation assumed is: Full and open sealed bi	0%	+/-	<u> </u>			
		Subtotal 4 = Subtotal 3 + APS	a competition			<u> </u>	• • • • • • • • • • • • • • • • • • • •	
		CONTRACT COST				-	\$1,200,000.00	
		Construction Contingencies	100/	. /			\$1,200,000.00	
		FIELD COST	18%	+/-			\$250,000.00	
		Non-Contract Costs	25%	. /			\$1,450,000.00	
		(Environmental Cultural / Mitigation ~ 5%, Engineering	25%	+/-			\$350,000.00	
			-					
		Design ~ 4%, Maintenance Service Contract ~ 4%						
	-	Procurement ~ 1%, Inspections ~ 10% and Closeout ~ 1%)	-					
		CONSTRUCTION COST						
		ochomiconor cost					\$1,800,000.00	
								
			<u> </u>					
		Ref.: For appropriate use and terminology, see Reclamation Ma	nual Directive	es and Standar	rds FAC: 0	09-01 09-02 and	00-03	
<u>.</u>		QUANTITIES	T T T T T T T T T T T T T T T T T T T	o and otalida	PRICE		09-03,	
ΒY				hr		CHECKED	7	
ick Be	nik	Stephen Latham	BY 9.	Greg Akins	į	5/2	water las	
DATE PREPARED PEER REVIEW / DATE			DATE PR			PEER REVIE		
3/24/1		Tom Hepler P.E. 3/25/11		9/11			6 13/11	
			1		1	ATT	4 1 . 7 11	

		PROJECT:					
Klamath River Dams Removal	Klamath River						
Partial Removal Option Or	Oregon						
Copco No. 2 Dam & Powerplant Removal WOID:	AF652	ESTIMA	TE LEVEL:	Feasibility			
Most Probable Low REGION:	MP	UNIT PR	IICE LEVEL:	Jan-11			
			ath\002 Completed Sheets\MP MPL MPH\02				
Operation and Maintenance - Initial Capital Costs	PL\[Copco 2 MF	PL - Probable.	xlsx]Life Cycle Summary	,			
ACCOUNTY ACC	QUANTITY	UNIT	UNIT PRICE	AMOUNT			
1 Furnish, install, and maintain a 7-foot-high chain 86-68130	500	lf	\$50.00	\$25,000.00			
link fence on all four sides of the powerhouse							
(assume a double 12ft wide gate for vehicle access)		,					
(assume replace one time)							
2 Repaint exposed portion of penstocks 86-68130	18,300	ft2	\$3.50	\$64,050.00			
(assume repaint 2 times)							
Estimate assume minor paint repair ~ 2% area							
3 Repaint sloping trashrack at penstock intake 86-68130	8,900	ft2	\$4.00	\$35,600.00			
(quantity based on repainting all four sides of							
each 4" by 1/2" bar in trashrack, 48-ft-wide by							
32-ft-high vertical opening, includes top plate)							
(assume repaint 2 times)							
Estimate assume minor paint repair ~ 2% area							
4 Repaint gratings at penstock intake (quantity 86-68130	1,300	ft2	\$6.50	\$8,450.00			
based on repainting all four sides of each 5/16" by							
2 1/4" bar in grating, assume repaint 2 times)							
Estimate assume minor paint repair ~ 2% area							
5 Repaint caterpillar gate (assume access available 86-68130	1,800	ft2	\$6.50	\$11,700.00			
to both sides of gate, assume repaint five times)							
Estimate assume minor paint repair ~ 2% area							
6 Repaint caterpillar gate hoist structure 86-68130	1,400	ft2	\$6.50	\$9,100.00			
(assume repaint 2 times)							
Estimate assume minor paint repair ~ 2% area							
7 Repaint trashrake superstructure 86-68130	370	ft2	\$11.00	\$4,070.00			
(assume repaint 2 times)							
Estimate assume minor paint repair ~ 2% area							
8 Furnish, install, and maintain a 7-foot-high chain 86-68130	350	lf	\$50.00	\$17,500.00			
link fence on all four sides of penstock intake							
structure (assume single 3ft wide gate for access)							
(assume replace once times)							
LIFE CYCLE SUBTOTAL				\$175,470.00			
QUANTITIES	PRICES						
BY CHECKED BY	BY Juyth			CHECKED			
Rick Benik Stephen Latham dre	eg Akins		Manual	1916 CUBA			
DATE PREPARED PEER REVIEW / DATE DATE PREPAR	ED	1. i	Landa PEER REVIEW / I	DATE			
03/21/11 Tom Hepler P.E. 3/24/11 04	4/25/1 4 5/	4/11	DED !	5/4/11			

FEATURE: Klamath River Dams Removal				PROJECT: Klamath River						
	Remo	oval Site Mai	intenance	WOID:	AF484	ESTIM	ATE LEVEL:	Feasibility		
	Most	Probable Lo	w	REGION	: MP	UNIT F	PRICE LEVEL	Jul-10		
	Life Cycle - 50 Year				FILE: U:\2011 Projects\Klamath\002 Completed Sheets\MP MPL MPH					
	Oper	Operation and Maintenance - Periodic Costs			2\MPL\(Copco 2 MPL - Probable.xlsx)O&M					
PLANT ACCOUNT	РАУ ІТЕМ		DESCRIPTION	CODE	QUANTITY	UNIT	UNIT PRICE	AMOUNT		
		Cita Malatan				1.0	200 000 00	400 000 00		
	1	Site Mainten	ance - Annual: Copco 2 Site only*		1	LS	\$30,000.00	\$30,000.00		
		Labor needed	per year	86-68130	90	mdy**				
		3-Man mainte	nance crew							
		6 Months	active inspection/maintenance							
		2 Weeks f	ull time (1 month each spring)							
		4 Full day	s, 2 times each month (5 months)							
		Site maint	enance required at JC Boyle,							
		Сорсо	1 & Copco 2							
		Estimate p	prorated the time at each dam site based							
		on percen	t of total partial removal construction costs							
		Equipment ne	eded per year	86-68130	30	dy***				
		1-Service truc	k							
		Includes c	ompressor, welder, generator							
		and ge	eneral tools							
		Estimate p	prorated the time at each dam site based							
		on percen	t of total partial removal construction costs							
		Materials needed per year (percentage of labor		86-68130	15%					
		& equipment)				<u> </u>				
		Road maintenance needed per year (percentage		86-68130	10%					
1		of labor & equipment)								

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		P. S								
		*Total estimate	ed cost for all 3 sites is approximately \$100,000 a	annually:				· · · · · · · · · · · · · · · · · · ·		
		prorated ±30% for the Copco ₺site only								
	** Man days per year for 50 years									
		***Days per year for 50 years						1		
		,-,-,-	SUBTOTAL THIS SHEET					\$30,000.00		
QUANTITIES						PRI	CES	. ,		
CHECKED CHECKED				вү	9	~	CHECKED			
lick Be	enik		Stephen Latham		Greg Akins	-		14/2 10 May		
			PEER REVIEW / DATE	DATE PRE			PEER REVIEW	DATE		
4/18/1			Tom Hepler P.E. 4/18/11		14/11		Aca	5/4/11		
				<u> </u>				71/4		